BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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COMMENTS OF THE DIVISION OF RATEPAYER ADVOCATES ON THE STAFF WHITE PAPER ON RENEWABLE ENERGY CERTIFICATES AND THE CALIFORNIA RENEWABLES PORTFOLIO STANDARD PROGRAM

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TABLE OF CONTENTS

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I. INTRODUCTION

Pursuant to the schedule set forth in assigned Commissioner Peevey's Ruling of April 28, 2006, as modified by Administrative Law Judge (ALJ) Simon on May 22, 2006, the Division of Ratepayer Advocates (DRA) submits the following comments on the Staff White Paper on "Renewable Energy Certificates and California Renewables Portfolio Standard Program" (White Paper).

The Staff White Paper was issued on April 20, 2006. Following the issuance of the White Paper, ALJ Simon issued a ruling requesting parties' comments on specific issues regarding the commercial availability of firmed and/or shaped products for Renewable Portfolio Standard (RPS) eligible generation and the mechanism and implementation of an unbundled Renewable Energy Credits (RECs) system, if the Commission were to adopt one.

DRA does not now know of any commercially available firmed or shaped products for RPS-eligible generation in California. Further, as the White Paper clearly recommends, DRA urges the Commission to proceed with caution in any proposal for the implementation of an unbundled tradable-REC regime. DRA's comments first address

the issues in the ALJ's ruling regarding the mechanism and implementation of a tradable-RECs regime. DRA's comments also address other critical areas of the White Paper the Commission should heed more seriously.

DRA commends Staff on the excellent study the White Paper compiled to elucidate California's efforts to implement one of the most aggressive RPS programs in the country. The White Paper includes an excellent history of the development of the California RPS and a summary of the critical issues involved in the use of Renewable Energy Credits (RECs) to meet the RPS requirements of the California utilities and other Load Serving Entities.

II. SHOULD THE COMMISSION ADOPT THE USE OF "UNBUNDLED RECs" FOR RPS COMPLIANCE?

Under the definition of unbundled RECs as used in the White Paper, the Commission may already have approved a transaction that can be described as an unbundled REC in one form or another in current RPS implementation. Therefore, DRA supports some unbundling of RECs as currently extant in the state.

D.05-11-025 defines unbundled RECs as follows:

> By "unbundled" RECs, we mean a single transaction from the original renewable resource to a single buyer who does not necessarily acquire the associated energy. By "tradable" RECs, we mean RECs that can be traded among multiple buyers and sellers on a secondary market.

(D.05-11-025, note 10, p.16.)

Adopting this definition, the White Paper stated:

> Under an unbundled REC regime, claim over the renewable attribute of energy produced by eligible renewable technologies can be transferred from the renewable generator to one LSE while the energy is delivered to another. However, once this transfer occurs, claim over the attributes cannot be resold.

Until the White Paper was issued, the transactions which the White Paper defined as unbundled RECs were not typically construed as such, but clearly fit the definition in D.05-11-025. For instance, the decision allowing California's Investor Owned Utilities

(IOUs) to accept delivery of RPS compliance energy anywhere in the CAISO controlled area of the state, even if the purchasing IOU does not ultimately receive the energy, essentially unbundled the renewable attribute of the delivery from the actual energy delivered. The White Paper considers such RPS delivery any where in the state as an unbundling of RECs used for RPS compliance. This definition may be faulted because it lacks the "credit" element that ultimately facilitates the purchase and sale of a REC attributes, but it is reasonably within the definition stated in D.05-11-025. In any case, DRA maintains that distinction between a U-REC and T-REC must be maintained as U-RECs need not be tradable.[1]

DRA believes that a renewable energy attribute more properly comprises a U-REC when the producer of an RPS compliant resource performs the unbundling, rather than the receiver. DRA believes that the U-REC is a viable option that should be considered by the Commission as it has many of the benefits of a T-REC system without some of the implementation and verification problems that must be addressed in a T-REC structure.

However, the Commission should more clearly define what constitutes an unbundled REC product for RPS compliance in order for parties to properly and more fully assess the impact of the specific products on RPS in general.

A. If The Commission Were To Adopt The Use Of Unbundled RECS, How Should The Unbundled RECS (Sold Separately From The Commodity Energy) Be Reported In The LSE's Compliance Reporting To This Commisson?

The U-RECs, assuming the source is certified as an eligible renewable technology by the California Energy Commission (CEC), would be reported to the Public Utility Commission in the same manner as bundled renewable energy is presently. In order to

[1] In these comments DRA will use the term "unbundled REC" or the acronym U-REC, to mean, as defined in the study, RECs from a single transaction from the original resource to a single buyer who does not acquire the associated energy. The term "tradable REC", or the acronym T-REC will be used in a system where the RECs can be resold subsequent to the original sale.

implement a T-REC mechanism, additional verification criteria would need to be established.

B. If The Commission Were To Adopt The Use Of Unbundled RECS, How Should The Unbundled RECS Be Reported To The California Energy Commission For Verification Purposes?

The CEC would need to be given the necessary information verifying the eligibility of the renewable technology, the actual generation amount, and the sales of the commodity (without the REC) energy. For a U-REC system continue using the present "contract path" method.

C. If The Commission Were To Adopt The Use Of Unbundled RECS, How Should Purchases Of Unbundled RECS Be Treated For Purposes Of The Application Of The RPS Market Price Referent? (See Pub. Util. Code § 399.15.)

There is currently no way to understand or develop any method for applying RPS Market Price Referent (MPR) to an Unbundled RECs regime. To begin with, the MPR was designed to mirror the long-term marginal cost of energy, not what may be available now on the spot-market or for short term contracts from existing fossil fuel plants. This long-term analogue is inconsistent with any RECs regime, the primary purpose of which is to create a flexible compliance mechanism for Energy Service Providers (ESPs), Community Choice Aggregators (CCAs) and small or multi-jurisdictional utilities whose business structure may not support a long-term investment for procuring energy.

> The risks associated with long-term contracts do not automatically disappear if unbundled REC purchases are allowed, but the long-term contracting requirements remain, such that unbundled RECs are purchased on a long-term basis. Concerns about stranded costs resulting from loss of load would persist.

(White Paper, p.12.)

Further, as the White Paper noted, RECs are incompatible with supplemental energy payments (SEPs) which MPRs are used to calculate. The MPR was developed to

make RPS resources competitive with fossil fuel plants by paying the LSEs the amount over the cost of a comparable fossil plant that renewable energy resources impose upon them. These above (fossil fuel plant) market costs are compensated through the payment of supplemental energy payments (SEPs). However, the White Paper concluded:

> This [SEP] approach appears incompatible with an unbundled or tradable REC regime. Each point on the renewable energy supply curve represents the price generators must receive in order to produce a corresponding amount of output. Implicitly these monies can be split into two components: the value of the energy, and the value of the renewable attributes.
>
> …
>
> This is where the incompatibility of the SEP structure and the tradable REC regime comes to the fore. Under an unbundled regime, all generators except the marginal unit receive a total combined price for their energy and RECs that exceeds what they require to be willing to produce renewable energy. In contrast, under the SEP structure, each generator theoretically receives only the amount that is necessary to induce them to enter the market.

(White Paper, pp.34, 35.)

D. If The Commission Were To Adopt The Use Of Unbundled RECS, Should It Also Adopt Contracting Requirements For The Purchase Of Unbundled RECS (E.G., An Obligated LSE Must Contract With An Eligible Generator For The Purchase Of Unbundled RECS For A Minimum Period Of Years)?

Yes. This issue is being considered now in the Short Term RPS Contract proceeding as part of the RPS (R.06-02-012). U-RECs should be under the same contract length constraints as renewable contracts. Otherwise, the U-REC could become a method for evading the contract requirement.

The main purpose for requiring long term contracts is to allow the renewable plant builder to obtain financing based on a long term revenue stream. The proponents of T-RECs generally have a different position. Promoters of a trading market in RECs want

short term instruments. DRA believes a short term market instrument would not in itself adequately promote investment in renewable resource projects.

E. If The Commission Were To Adopt The Use Of Unbundled RECS, Should All RPS-Obligated LSES Be Able To Make Unlimited Use Of Unbundled RECS For RPS Compliance? If The Commission Should Adopt Some Limits On The Use Of Unbundled RECS For RPS Compliance, What Should Those Limits Be?

There are many facets to this question because the answer depends on the purpose for which the Commission may adopt the use of unbundled RECs. Fairness dictates that the rules should be uniformly applied to all LSEs, but the facts suggest that some LSEs need RECs for flexible compliance more than others. Since a major purpose of the RPS is to promote the construction of new renewable energy sources, any limit issue will be inevitably tied to the length of contracts and other aspects of a proposed U-RECs system.

Therefore, if the purpose of adopting such a regime is to allow parties more flexible compliance, then the Commission must consider limitations that ensure that those LSEs that do not need RECs for flexible compliance, would not use them to circumvent otherwise necessary investment in long-term renewable energy products.

DRA maintains that the Commission should initiate evidentiary hearings to explore these limitations further if it is inclined to adopt any type of RECs regime. Further, a record has already been developed to address part of this issue. Specifically, as far as short-term contracts for use in RPS compliance are concerned, whether for renewable energy procurement or for RECs, the issue should be declared beyond the scope of the White Paper and considered on the record in the just concluded hearing to consider the use of short-term contracts for RPS compliance by ESPs, CCAs and small and multi-jurisdictional utilities.

The Commission must proceed cautiously in the efforts to develop a REC regime for RPS compliance, beyond what may already be considered as such under current rules.

III. OTHER CRITICAL ISSUES

The White Paper includes an excellent summary of the critical issues involved in the use of RECs to meet the RPS requirements of the California utilities and other Load Serving Entities. In particular:

- The WP does not adequately identify that though all tradable RECs are unbundled, not all unbundled RECs are tradable. The distinction is important because an unbundled REC structure is a distinct option from a tradable REC scheme. The White Paper delineates the differences between an unbundled REC regime and the tradable REC system[2]. However this difference becomes lost in the remainder of the White Paper during the discussion of various policy choices. Through the general use of the term "unbundled/tradable REC" or the use of "unbundled RECs" to apparently mean tradable RECs, the White Paper ignores the significant distinction made in Decision 05-11-025.
- The WP doesn't adequately identify the risks that T-RECs may raise ratepayer costs for renewable resources. It is not clear that a T-RECS trading system will result in benefits to the ratepayer, or that they will result in more renewable energy at lower cost. However, the Paper[3] does admit that, "To the extent that an unbundled REC regime militates toward the development of a different set of renewable resources than would occur under a bundled regime, the resulting benefits are likely to be different". The paper would benefit from a discussion identifying that the Commission should maintain its processes for reviewing IOU long-term procurement plans regardless if the IOU utilizes T-RECs. Rather, the principles of least cost / best fit procurement should continue in the Commission's evaluation of renewable

[2] See note 1 on page 1 of the Executive Summary. In these comments DRA will use the term "unbundled REC" or the acronym U-REC, to mean, as defined in the WP, RECs from a single transaction from the original resource to a buyer who does not acquire the associated energy. The term "tradable REC", or the acronym T-REC will be used in a system where the RECs can be resold subsequent to the original sale.

[3] Page 1. (All page numbers refer to the .pst version of the White Paper)

procurement in spite of introduction of a T-REC market.

- The WP appropriately recognizes that unbundled RECs would have environmental and economic benefits inside and outside of California and that California policy would need to explicitly recognize intra-regional benefits as a policy goal.
- The WP considers the results of temporal flexibility in the meeting of the RPS requirements, including the probable necessity of not allowing unlimited "banking" (saving surplus RECs indefinitely) if REC trading is allowed. Some banking of credits can be a hedge against price volatility.
- The WP appropriately identifies the potential of future problems of integrating the RPS system with emission trading markets, especially future greenhouse gas limits.
- The WP appropriately concludes that existing renewable power plants shouldn't be awarded SEPs or T-RECs in order to avoid windfall profits.[4]
- The WP appropriately concludes that the experience of other states that combine allowing T-RECS with RPS systems is not yet conclusive. It is not certain that T-RECs itself cause investment in renewable projects.
- The paper gives, in Appendix A: "Firmed and Shaped Renewable Energy Products" a misleading interpretation of the need for firming intermittent renewables.
- The report does not adequately consider or discuss taxation in the form of an environmental adder. Further, the compatibility of an RPS mechanism with future regulation, including carbon emissions, local pollutant emissions and a more thorough approach to the specific benefits of renewables should be discussed in context of the various options.

[4] P. 41.

Table 1

REC Type	Liquidity	Delivery	Rate Exposure	Economic Benefits	Environmental Benefits	Sizable MWH	Regulatory Verification
Bundled (IOU built or contract)	Least	Strict	SEP Cap	In State	In State	Set by owner	Utilize existing structures
Unbundled (bi-lateral)	Some	Strict or Open	Need price or exposure cap	In and out of State	In and out of State	Set by owner	Expand existing structures
Tradable	Most*	Not controllable if WREGIS used	Need price or exposure cap	In and out of State	In and out of State	Set by trading platform	New most complex structures needed
Alternative Environmental Adder	N/A	Strict or Open	Need exposure cap	In and out of State	In and out of State	N/A	Utilize existing structures

Table 1, indicates the attributes of the three REC types; bundled, unbundled and tradable. REC types have conflicting advantages and disadvantages. Whereas the bundled REC requires California specific economic and environmental benefits, it has the least liquidity and volatility. On the other hand, tradable RECs are the most liquid yet they require new complex oversight structures. Unbundled RECs have many of the attributes of tradable RECs, yet require only expansion on existing regulatory structures. An alternative to the REC program entirely is the use of an Environmental Adder, which is a tax on conventional generation to internalize their environmental costs. Determination of the environmental adder amount would be controversial, as determining the correct amount for conventional resource versus those renewable resource types that have their own unique environmental costs would be difficult.

A. DRA Recommends Further Analyses And Consideration Of A REC Regime's Impact On Ratepayers

The White Paper appears to give cursory consideration to the impact of any RECs regime on IOU's bundled customers, focusing almost exclusively on the disproportionate impact of a non-REC regime on the customers and business structure of the ESPs, CCAs and small and multi-jurisdictional utilities.

In one instance, the White Paper suggests that a REC regime that burdens IOU bundled customer ratepayers more than it burdens utility shareholders and/or customers of ESPs, CCAs and small or multi-jurisdictional utilities is preferable:

> IOUs in California may have relatively limited financial incentives to enter into long-term contracts, despite the benefits these contracts provide to ratepayers and renewable energy developers. By the same token, there is relatively limited risk for them to enter into these contracts, given their ability to pass costs onto ratepayers and their relatively stable loads. Thus, regulations that obligate the IOUs to enter into long-term contracts seem unlikely to impose undue burden. However, for smaller LSEs, long-term contracts for renewable energy are likely to be problematic, given the relatively higher levels of load variability and lack of guaranteed load that small LSEs face. For example, if an energy intensive industry shuts down in a small LSE's service territory, the impact on its total load can be substantial, such that it will be left holding a surfeit of energy under a long-term contract. The cost of this energy will need to be reallocated to the remaining load, or, if a deregulated market prevails, absorbed by shareholders. … In contrast, because of their size and the diversity of economic activity within their service territories, the large IOUs are less vulnerable to dramatic load reductions and any attendant reallocation of costs, thus the risk associated with long-term contracts is comparatively less. More importantly, this risk [for the IOUs] is borne by utility ratepayers, not shareholders, since the utilities can roll the costs of energy into their rates, such that even if a significant reduction in load were to occur, remaining load would simply have to shoulder a greater share of all costs. For ESPs, the ability to pass additional costs on to ratepayers is limited by the prices charged by the utilities, with whom ESPs compete, as well as by the contractual terms they have entered into with their customers.

(White Paper, p.30.)

Whether or not the risks borne by utilities' bundled customers are less than would be borne by ESP shareholders should not resolve the matter. Bundled ratepayers suffer the risk of numerous IOU costs passed on to them all the time under a regulatory framework that does not usually affect the small LSE shareholders and their customers. The addition of any new such cost must be considered in the context of all these other rate impacts.

The White Paper often notes theoretical "economic efficiency" advantages of T-RECs, but it isn't balanced about the downside of their use. T-RECs may raise ratepayer costs toward renewable resources in comparison to the SEP mechanism. It is not clear that a T-RECS trading system will result in benefits to the ratepayer, or that they will result in more renewable energy at lower cost. The White Paper does admit on page 1, "To the extent that an unbundled REC regime militates toward the development of a different set of renewable resources than would occur under a bundled regime, the resulting benefits are likely to be different".

While the evidence is not yet available to answer the ratepayer impact question, economic theory can help identify potential impacts. Absent long-term contracting, there may be both short term and long term increases in ratepayer costs as a result of a T-RECs trading system. First, consider the discussion of REC price determination under an RPS (figure 2) [5]of the report, which identifies "price" along a renewable energy "supply curve". What is missing from the diagram is the downward sloping demand curve and the recognition of a demand shift from intersection points P*Q* to P**Q**. Given the demand curve shift the price of RECs are likely to exceed P** along the downward sloping demand curve. Second, given the least cost / best fit methodology employed by LSEs to contract with renewable suppliers, the cost of renewable energy is indicative of the area under the supply curve. However, once the T-RECs mechanism is employed the cost to ratepayers will be set by the T-REC clearing price that is applicable to all T-REC resources. Thus, the cost will exceed the area above the supply curve, up to the level of the T-REC price. Given a fixed supply curve, the T-REC mechanism definitively results in an increase in ratepayer costs above the long term contract methodology.[6] DRA recognizes the mitigating factors that future downward shifts in the supply curve would have in reducing costs for renewable resources. If there were to be frequent downward shifts in supply, the T-REC mechanism would be superior in that market prices would

[5] P. 38 of the .pst version of the White Paper.

[6] This is the reason the RPS was set up to have secret bidding by suppliers to the LSE's.

instantly reflect the new cost efficient technology. However, shifts in supply are not necessarily always frequent, nor always downward. The future is not certain.

B. Bundled RECS, Unbundled RECS And Tradable RECS

The White Paper recognizes the continuum between the extreme positions, and gives both sides of major issues. This makes it significantly more valuable than previous studies that take just one side and present only evidence from that viewpoint. Also earlier discussions of the tradable RECs issue consider only two options, the possibility of renewable generation and delivery in a LSE's territory (strict delivery) vs. a trading market for RECs.

The White Paper clearly delineates the various options between an unbundled REC regime and the tradable REC system[7], although this difference sometimes becomes blurred in the discussion of various policy choices. If we assume that the White Paper is using "unbundled REC" in the sense defined in the note on p.1 of the Executive Summary, then almost all of the questions presented by the ALJ to guide these comments do not consider the possibility of a tradable REC (T-REC) system. DRA believes that the Commission should consider U-RECs as an option to the T-REC structure.

C. Delivery And The Geographic Issue

One of the factors in the passage of the RPS was the hope that it would encourage local economic activity. This will be diluted by any system that allows greater locational flexibility in meeting the RPS.

It could be argued that areas with extensive renewable electricity resources should have lower energy costs. This would promote, in market economic theory, the moving of energy users (especially high use industries) closer to cheap electricity. Under the inevitable progression of the State to higher use of renewable energy this could have significant implications. An historical example of this phenomenon is the clustering of aluminum smelters in the Pacific Northwest to be close to cheap hydro-electric energy.

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[7] See note 1 on page 1 of the Executive Summary.

Of course if any RPS system disregards the capital and operating costs of long distance electric transmission, and the electrical losses in this transmission, this factor would be lost. It could also result in a system wide higher electricity cost.

A geographically flexible T-RECs trading system will provide an opportunity for LSEs to meet its RPS with out of state resources. The California RPS law, like the RPS legislation in many other states[8], mentions economic development, employment, local air quality, public health, and energy independence as benefits of the RPS[9]. The form of direct benefits to California citizens and ratepayers may be different than envisioned in the law, and some elements of the state law may be incongruous with a T-REC system. Rather than having all renewable resources located within California borders, California policy should recognize that reductions in CO2 emissions have benefits that extend beyond its borders into the western region. While the environmental benefits of utilizing out of state RECs would be realized outside of California, the benefit to ratepayers may be increased access to less expensive renewable projects located in neighboring states. It is imperative that the T-REC tagging system reflect California RPS attributes. Only then can the intent of California law be fulfilled through a T-REC market with LSE compliance. Additionally, only with a tagging system that incorporates California recognized RPS attributes can the potential for gaming remain in check.

D. The Geographic And Transmission Issues

Decisions on allowing flexibility of location and time of delivery of renewable energy should be made on their own merits, and not made because they supply an easier route to deliver "product" in a T-RECs market. The CPUC decided in D.05-07-039 that regulated utilities could sign contracts for delivery of energy anywhere to the ISO, rather than to the service territory of the purchasing or generating utility. The Commission

[8] The "White Paper" points out that the state of Massachusetts doesn't include economic development as a goal in its RPS law. P.42.

[9] White Paper, p.9.

must realize that If it adopts T-RECs without a geographic limitation[10], it would be the functional equivalent of expanding eligibility to renewable energy delivered anywhere in the Western states and parts of Canada and Mexico.

The treatment of transmission capital and operating costs, and their electrical losses combines with the issue of developing resources giving an advantage to areas with exceptional renewable resources results in three potential options:

1. Use least cost analysis, based on statewide or regional areas, but ignore transmission costs and losses, or allocate them broadly. This will give everyone some advantage of lower cost renewables.
2. Allocate transmission costs and losses to each area. Use least cost analysis. This will give the lowest system average costs and let energy costs be somewhat cheaper in excellent resource areas, or
3. Use least cost analysis, but assume transmission costs infinite (i.e., strict location requirement). This will give every area the economic and locational advantages of having renewables. But it will have the highest total renewable cost.

E. Temporal Flexibility, "Banking" And "Borrowing"

The White Paper considers the results of temporal flexibility in the meeting of the RPS requirements, including the probable necessity of prohibiting unlimited "banking" (saving surplus RECs indefinitely) if REC trading is allowed. Of course, under any RPS system, a utility with extensive low cost renewable sources might find it advantageous, or even less expensive than using fossil fuel, to generate or buy renewable energy in excess of its RPS minimum. This should not be discouraged by any RPS system.

Banking refers to a load serving entity (LSE) retaining surplus RECs (from a year in which the LSE generated or bought more RECs than required by the RPS) to apply to a

[10] The White Paper suggests that a geographic limitation might violate the commerce clause in the United States Constitution. DRA neither concedes nor rejects this suggestion in these comments.

future year. It is clear that society benefits when more renewables are used than required, and also benefits the sooner the renewables are generated. But some would argue (and some states require) that banked RECs be used in a certain time period, generally within three years. The reason given is that forcing these into the market helps market "liquidity" and reduces the chance of "hoarding". A limited banking proposal, such as three year banking seems to be favored in many states. Banking also provides an opportunity for entities to hedge against price volatility.

F. Long Term Vs. Short Term Contracts

DRA suggests that a **long term contracting requirement remain for a portion of all RPS compliance.** A major element of the RPS law is requiring utilities to sign long term contracts of ten to twenty years in length. Since renewable plants have high capital costs they tend to require long term contracts. Allowing short term or spot market RECs could very well have the effect of not increasing renewable plant construction, but of instead causing a spike in T-RECs prices. Since it generally takes even longer to finance, permit, and build a renewable plant, there may be a lag in renewable development as REC prices are bid up to a level sufficient for investment in renewable projects.

The White Paper suggests that with a T-RECs regime may be appropriate to reduce or eliminate the long-term contract requirement for smaller LSEs. Yet, the paper identifies that long-term contracts serve an important role for hedging renewable energy against spikes in fossil fuel prices. Further, the evidence presented in the experience in other states is unclear that T-RECs have influenced investment decisions.

> Despite relatively widespread consensus on the theoretical benefits of an unbundled compliance framework, there is little evidence in the record demonstrating that unbundled/tradable RECs have ultimately facilitated RPS goals…

(White Paper, p.13.)

> Interestingly, there appears to be relatively little literature that expressly addresses the impact of unbundled and tradable RECs on the achievement and/or allocation of the underlying goals sought through RPS programs.

(White Paper, p.15.)

In any case, a change in the law may be necessary to eliminate the long-term contracting requirements for the IOUs. This being the case, the impact of a disparate requirement for IOUs and smaller LSEs, whereby the former is required to procure long-term contracts and the latter allowed short-term contracts must be studied further, and is likely litigious.

The White Paper also suggests that the possibility of future T-REC payments could support renewable investment, stating "Short term REC sales may also play a role to the extent that the prospect of short-term REC sales motivate renewable developers to build on a merchant basis"[11]. Yet T-REC prices have been extremely volatile, significantly more so than commodity energy costs. As mentioned in the Paper, the REC prices crashed in Massachusetts when a Connecticut plant was qualified as renewable.[12] On a larger level, recently the European Union CO_2 allowance price crashed, dropping by a factor of three during April 2006.[13]

G. Supplemental Energy Payments (SEPs)

The White Paper also notes the incompatibility of allowing the use of tradable RECS with the use of supplemental energy payments (SEPs) to foster renewables while setting a maximum ratepayer subsidy. As mentioned above in DRA's response to ALJ question 2.C. above, it would probably be possible to maintain the basic MPR and SEP system even with U-RECs, although this is an issue that might require evidentiary hearings.

The Paper argues that SEP payments to "infra-marginal" generators would be "producer surplus".[14] However, this same "producer surplus" criticism is applicable to T-

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[11] P. 41.

[12] WP, P.62, note 61.

[13] "Early Emissions Reports Deflate Carbon Market", Dow Jones, and "Data Leaks Shake Up Carbon Trade", New York Times, May 16, 2006.

[14] P. 40.

RECs as their market price is also determined at the margin, not whether the plant happens to be able to produce energy at a lower cost.

H. Integrating The RPS With Greenhouse Gas Limits

The White Paper correctly predicts the potential future problems of integrating the RPS system with emission trading markets, especially future greenhouse gas limits. The premise that energy costs should reflect, at least in some relative way, the total social costs[15] of energy production and distribution is becoming accepted. In the RPS system renewable sources are promoted due to the fact that most of the alternatives to them have higher social costs. A flaw in the RPS approach is that it implicitly assumes that each non-renewable energy resource type has the same economic and social costs. Other forms of regulation, such as limits, taxes, or caps on GHG emission will be more accurate in differentiating within fossil fuel sources. Until the time that energy resource decision considers the social costs attributable to each resource type, many of which are difficult to quantify, the general RPS makes sense. However, the RPS should be structured, if possible, to become part of a future system that considers all these costs of energy. Or, alternatively, the RPS could be kept as inexpensive and simple as possible in the assumption it will soon be replaced by some larger system.

The White Paper recognizes that a comprehensive T-RECs system could become too complex to effectively administer, yet the paper does not consider alternatives to the RECs program. Specifically, the paper states:

> In California, limits on carbon emissions appear to be an impending reality. Policy makers will need to reconcile any REC program with whatever carbon regime emerges. .. Under ideal circumstances, all trades involving generation attributes would be tracked using one system. Absent this capability, it becomes difficult, if not impossible, to determine what, exactly, a REC represents and whether or not a partial double-sale has occurred. That said, disaggregation and tracking of

[15] These external costs include local air pollution, greenhouse gas emission, the short and long-term dangers of nuclear energy, the social costs of obtaining and delivering fuel, price volatility, dependence on repressive foreign regimes for fuel, etc.

> underlying benefits greatly increase the administrative complexity associated with the program, since the tracking system would need to track each of the underlying attributes separately

(White Paper, p.26.)

An alternative to the RECs program might be to impose a tax, limit, or other penalty on the external costs of all electric generation (especially CO2 production, but also including air and water pollution). In this way, the costs of "clean" energy are lowered relative to the costs of non-clean energy. This approach has the advantage of promoting energy efficiency in a simple and consistent way. It also solves an inherent problem with the RPS system of lumping all energy into either renewable or non-renewable categories, even though some "non-clean" energy sources are far dirtier than others, and even though many if not all "renewable" energy sources cause some damage to the environment. The downside of this approach is to identify the appropriate tax amount. Regardless, this alternative should be considered before developing a more and more complex REC system.

I. REC Monitoring And The WREGIS System

The RPS legislation tasked the CEC with setting up a monitoring system to verify that the California utilities and other electrical suppliers (LSEs) were meeting their renewable requirements. Rather than set up a system for just California, the CEC in conjunction with the Western Governors' Association promulgated the Western Renewable Energy Generating Information System (WREGIS), an independent western regional renewable platform to provide the data necessary to substantiate and support verification and tracking of renewable energy generation. The intent is to facilitate the different western jurisdictions implementation of RPS programs or similar renewable targets.

Once WREGIS is in operation, a T-RECs market could build on this platform to set up a trading regime. [16] The original planned operation date of WREGIS (just the monitoring part) was the end of 2005 but at present they haven't received a bid in final form. In addition, they anticipate several certification problems related to the different U.S. states (and parts of Canada and Mexico) having different rules for renewable qualification, the issue of some plants being fueled only partly by renewable fuels[17], different in-state vs. out-of-state rules, some generators selling RECs in bilateral contracts not going through WREGIS, and hydro pumped storage and "motoring" treatment. In addition, there is the possibility of "semi-dirty" plants being built in a state where they are legal but not RPS REC-eligible, and selling the RECs in a state where they meet different RPS standards. See Section 5 below on "Limitation of Gaming".

A T-RECs market, whether based on WREGIS or not, will soon run into the problem of how to, or whether or not to, integrate green house gas penalties or taxes into the market[18]. This is another reason not to rush into a T-RECs system before it is even decided what the REC includes.

J. Alternative Compliance Payments (ACP)

The White Paper proposes to replace the Supplemental Energy Payments (SEP) cap with an alternative price cap. The paper concludes that the use of Supplement Energy Payments (SEPs), a key part of the California RPS, are "inherently incompatible"[19] with T-RECs system. The ratepayer issue here is that under the SEP, the exposure to "high costs" of renewable resources (defined as costs above the market price referent) is limited and known. Under the SEP, the ratepayers are protected from exorbitant costs above that paid to conventional generation in the amount of the size of

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[16] Although the proponents of T-RECs see this transfer of costs as logical, it is probable that the monitoring costs of a system designed to monitor each category and combination needed for each state's RPS rules will be higher than the costs of a simpler system.

[17] For example, PURPA qualifying facilities can use up to 25% non-renewable fuels.

[18] White Paper p. 3.

[19] White Paper, pp. 3, 17, 23-25, 53.

the fund. The alternative price cap is similar in effect. However, the limit of costs above conventional generation is not a factor, and the exposure amount is potentially much greater. While the "alternative price" would be capped, the quantity of renewable resources purchased at that price is not. Further, there would be pressure from renewable resource suppliers to maintain a high cap, such that the market would not be constrained from sending an appropriate "price" signal to encourage long-term investment.

Looking back at Figure 3 in the White Paper, with a downward sloping demand curve, the quantity Q** can only be reached if market prices are allowed to exceed P**. Thus ideally, the alternative cap must also exceed P** such that the price signal to renewable resources influences their investment in order to reach Q**. The concept is simple on paper, but in the practice, setting a price that both protects ratepayers from exorbitant costs and influences investment is potentially contradictory.

The White Paper would also benefit from discussion of the how monies received via the alternative cap would be collected, maintained and distributed. Such a discussion would be useful to establish criteria for spending the ratepayer dollars and for what purpose and benefit.

The White Paper proposes "alternative compliance payments" instead of "penalties" for not meeting the RPS.[20] The "alternative compliance payments" are defined as a cap on the price of RECs. LSEs that pay the alternative compliance payments wouldn't have to make up the energy later. In short, they could buy their way out of the RPS obligations when prices exceed some predetermined level. This would reduce the amount of renewable energy produced. The T-REC alternative cap implementation goals need to be discussed. Will T-REC prices be allowed to rise to any level necessary to obtain the 20 percent renewable by 2010? Or is the goal to limit ratepayer exposure to renewable resource costs, thereby creating a revenue pool for redistributing monies from the alternative cap? The goals need discussion in order to provide context for how the alternative cap should be implemented, if it is.

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[20] While Paper, pp. 25.

Another problem with the APC is that it may reduce long term contracts, as noted in the White Paper.[21]

K. Should Existing Renewable Power Plants Get RECS?

The Paper generally takes the position that already existing renewable power plants shouldn't be awarded SEPs or T-RECs.[22], DRA agrees that in this case "windfall" profits for certain developers should be avoided.

L. The White Paper Gives A Misleading Interpretation Of The Need For "Firming" Intermittent Renewable Energy

The White Paper gives, in its Appendix A: "Firmed and Shaped Renewable Energy Products", a misleading interpretation of the need for firming intermittent renewables. Studies of the costs of integration of intermittent renewable energy have found them to be very small for "firming". In fact, at present levels of intermittent renewables, the variation in output of these renewables is "noise" compared to the major source of variation (load swings), and the system firming needed to cope with the possible failure of any one huge power plant or a major transmission line. The cost for firming intermittent resources, at present penetration levels is virtually negligible[23], and is likely to remain so at significantly greater levels. In the future, if for example, the potential wind output postulated in the Tehacapis, or New Mexico, or Wyoming is realized, firming could be an issue.

IV. CONCLUSION

The "White Paper" identifies several important issues the Commission must consider if it decides to move toward a unbundled REC system, or possibly even to a tradable REC system. The White Paper points out several aspects of the present RPS system that will have to be changed if there are significant modifications to the REC

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[21] P. 65.

[22] P. 41.

[23] See, for example, California Renewables Portfolio Standard Renewable Generation Integration Cost Analysis, Multi-Year Analysis Results and Recommendations, by H. Shiu, M. Milligan, B. Kirby, and K Jackson, prepared for the California Energy Commission.

system. The Commission must consider if the advantages of the changes (primarily a theoretical higher "economic efficiency" from market operation) outweigh the disadvantages and risks of the changes. In addition, the Commission must make decisions based on the long term trend toward GHG regulation, of which the REC system may become a part, or which may make RECs obsolete. DRA urges caution and careful consideration of the implications.

For all the reasons stated herein, the Commission should adopt DRA's recommendations in these comments.

Respectfully submitted[24],

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[24] Don Smith provided the primary technical and analytical input for DRA's position.

APPENDIX

Legal References Cited

Cite	Issue
D.03-06-071	Banking of RECs, limit to 3 years
D.04-12-048	20 % renewable is a floor, not a cap
D.05-07-039	Delivery is OK anywhere in CA ISO
D.05-05-011	DG owners get RECs, for now
D.05-11-025	“Unbundled” vs. “Tradable”, and same rules for ESPs
EO S-3-05	Exec Order on GHG targets and 33% renewables by 2020.
PUC 399.25	Backstop Cost Recovery
R.06-02-012	New RPS, may deal with QF and net metering RECs.
SB 1078	The California RPS legislation

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of **COMMENTS OF THE DIVISION OF RATEPAYER ADVOCATES ON THE STAFF WHITE PAPER ON RENEWABLE ENERGY CERTIFICATES AND THE CALIFORNIA RENEWABLES PORTFOLIO STANDARD PROGRAM** in **R.06-02-012** by using the following service:

[X] **E-Mail Service:** sending the entire document as an attachment to an e-mail message to all known parties of record to this proceeding who provided electronic mail addresses.

[ ] **U.S. Mail Service:** mailing by first-class mail with postage prepaid to all known parties of record who did not provide electronic mail addresses.

Executed on May 31, 2006 at San Francisco, California.

/s/ ALBERT HILL
Albert Hill

N O T I C E

Parties should notify the Process Office, Public Utilities Commission, 505 Van Ness Avenue, Room 2000, San Francisco, CA 94102, of any change of address and/or e-mail address to insure that they continue to receive documents. You must indicate the proceeding number on the service list on which your name appears.

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